

Appln. No. 10/710,923
Docket No. 158982 / GEM-0053-P

REMARKS / ARGUMENTS

Status of Claims

Claims 1-45 are pending in the application. Claims 14-45 have been withdrawn from consideration by the Examiner. Claims 1-13 stand rejected. Applicant has amended Claim 1, has canceled Claims 14 and 15, has withdrawn Claims 16-45 without prejudice, and has added new Claims 46 and 47, leaving Claims 1-13 and 16-47 pending, and leaving at least Claims 1-13 and 46-47 for consideration upon entry of the present Amendment.

Applicant respectfully submits that the rejections under 35 U.S.C. §102(e) and 35 U.S.C. §103(a) have been overcome, that no new matter has been entered, and that the application is in condition for allowance.

Regarding the Advisory Action dated April 22, 2008

The subject Advisory Action stated that "the phrase 'and in location and navigation of an interventional tool' was still part of the at least one of group. The claims can still be read this way, even with the inclusion of an additional 'and' before atrial flutter planning procedure."

In response, Applicant has amended Claim 1 to separate to the two clauses to add further definition to the claimed subject matter. As such, Applicant submits that the phrase 'and in location and navigation of an interventional tool' can no longer be read as part of the at least one of group.

Objections to the Specification

The specification remains objected to from the Final Action for reasons relating to informalities and antecedent support.

Applicant has amended the specification as set forth above to address all reasons for this objection. No new matter has been added as antecedent support can be found in the application as originally filed, such as the originally filed claims for example.

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Accordingly, Applicant requests reconsideration and withdrawal of these objections, which Applicant considers to be overcome.

Rejections Under 35 U.S.C. §102(e)

Claims 1-13 stand rejected under 35 U.S.C. §102(e) as being anticipated by Okerlund et al. (US 2003/0187358, hereinafter Okerlund).

Applicant overcomes this rejection for the following reasons.

Applicant respectfully submits that “[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, *in a single prior art reference.*” *Verdegaal Bros. V. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987) (emphasis added). Moreover, “[t]he identical invention must be shown in as complete detail as is contained in the *** claim.” *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Furthermore, the single source must disclose all of the claimed elements “arranged as in the claim.” *Structural Rubber Prods. Co. v. Park Rubber Co.*, 749 F.2d 707, 716, 223 U.S.P.Q. 1264, 1271 (Fed. Cir. 1984). Missing elements may not be supplied by the knowledge of one skilled in the art or the disclosure of another reference. *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 780, 227 U.S.P.Q. 773, 777 (Fed. Cir. 1985).

Claim 1 has been amended as set forth above to now recite, inter alia,

“wherein said operator interface system comprises computer executable instructions stored in a memory for using the volume of cardiac image data and the at least one viewable image in at least one of a bi-ventricular pacing planning, an atrial fibrillation planning, and an atrial flutter planning procedure; *and*

wherein said operator interface system comprises computer executable instructions stored in a memory for using the volume of cardiac image data and the at least one viewable image *in location and navigation of an interventional tool in a 3D space of a cardiac chamber corresponding to the volume of cardiac image data.*”

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No new matter has been added as antecedent support can be found in the application as-filed, such as at paragraph [0047] for example. Dependent claims inherit all of the limitations of the respective parent claim.

Here, Applicant is claiming an imaging system that includes an operator interface that uses a volume of cardiac image data and a viewable image for location and navigation of an interventional tool in a medical intervention planning procedure.

In alleging anticipation, the Examiner looks to Figure 1 and Paragraphs [0017]-[0021] of Okerlund for support thereof.

In comparing Okerlund as referenced or otherwise with the claimed invention, Applicant finds Okerlund to disclose the use of an interventional system, but to be silent on the disclosure of an operator interface system having computer executable instructions stored in a memory for using a volume of cardiac image data and at least one viewable image in location and navigation of an interventional tool, as claimed.

Absent anticipatory disclosure of each and every element arranged as claimed, Okerlund cannot be anticipatory.

In view of the foregoing, Applicant respectfully submits that the Examiner's rejection under 35 U.S.C. §102(e) has been overcome, and requests that the Examiner reconsider and withdraw of this rejection.

Rejections Under 35 U.S.C. §103(a)

Claims 1-13 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Keidar (US 6,650,927, hereinafter Keidar) in view of Subramanyan et al. (US 6,782,284, hereinafter Subramanyan) and further in view of Chen et al. (WO 96/10949, hereinafter Chen).

Applicant overcomes these rejections for the following reasons.

Applicant respectfully submits that the obviousness rejection based on the References is improper as the References fail to teach or suggest each and every element of the instant invention in such a manner as to perform as the claimed invention performs. For an obviousness rejection to be proper, the Examiner must meet the burden of

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establishing a prima facie case of obviousness. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988). The Examiner must meet the burden of establishing that all elements of the invention are taught or suggested in the prior art. MPEP §2143.03.

Claim 1 has been amended as set forth above.

Dependent claims inherit all of the limitations of the respective parent claim.

In alleging obviousness, the Examiner acknowledges that Keidar fails to disclose the claimed operator interface, and looks to the user interface (44) of Subramanyan to cure this deficiency. Paper No. 20071130, pages 4-5.

Applicant respectfully disagrees that Subramanyan cures the deficiencies of Keidar.

In comparing the combination of references with the claimed invention, Applicant finds the Subramanyan user interface (44) to include a computer and vessel tracker software component (40) (Subramanyan, col. 4, lines 12-13), but to be absent any disclosure, suggestion or teaching of executable instructions for using the volume of cardiac image data and the at least one viewable image *in location and navigation of an interventional tool in a 3D space of a cardiac chamber corresponding to the volume of cardiac image data*, as claimed. Applicant further submits that a vessel tracker software component is substantially different from an interventional tool location and navigation software component (the vessel tracker tracks a vessel, not an interventional tool), and therefore cannot be applied to establish a prima facie case of obviousness.

In view of the foregoing, Applicant submits that the References fail to teach or suggest each and every element of the claimed invention and are therefore wholly inadequate in their teaching of the claimed invention as a whole, fail to motivate one skilled in the art to do what the patent Applicant has done, fail to recognize a problem recognized and solved only by the present invention (location and navigation of an interventional tool in a 3D space of a cardiac chamber), fail to offer any reasonable expectation of success in combining the References to perform as the claimed invention performs (location and navigation of an interventional tool in a 3D space of a cardiac chamber), and discloses a substantially different invention from the claimed invention,

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and therefore cannot properly be used to establish a prima facie case of obviousness. Accordingly, Applicant respectfully requests reconsideration and withdrawal of all rejections under 35 U.S.C. §103(a), which Applicant considers to be overcome.

In light of the foregoing, Applicant respectfully submits that the rejections under 35 U.S.C. §102(e) and 35 U.S.C. §103(a) have been overcome, and that the application is now in condition for allowance. Such action is therefore respectfully requested.

Regarding New Claims 46 and 47

Applicant has added new Claims 46 and 47 to capture originally disclosed but previously unclaimed subject matter. No new matter has been added as antecedent support can be found in the application such as at paragraphs [0032-0039] and [0047] for example. In view of the comments set forth above regarding the patentability of Claim 1 over the prior art of record, and in view of Claims 46 and 47 being dependent upon Claim 1, Applicant submits that Claims 46 and 47 are allowable at least for the reason that they depend from an allowable parent claim. Accordingly, notice of allowance of Claims 46 and 47 is respectfully requested.

Rejoinder of Claims 16-45

Claims 16-45 stand withdrawn by the Examiner. Claims 16, 31, 34 and 40 are independent claims.

Regarding Claim 16, the Examiner states in the Final Action that the invention of Claim 16 is distinct from the invention of Claim 1 because Claim 1 does not require segmentation processing or a geometric marker.

Regarding Claim 31, the Examiner states in the Final Action that the invention of Claim 31 is distinct from the invention of Claim 1 because Claim 1 does not require information to be retrieved from a database.

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Regarding Claim 34, the Examiner states in the Final Action that the invention of Claim 34 is distinct from the invention of Claim 1 because Claim 1 does not require the use of a 3D model.

Regarding Claim 40, the Examiner groups Claim 40 with Claim 34, which implies that the invention of Claim 40 is distinct from the invention of Claim 1 because Claim 1 does not require the use of a 3D model.

In view of the foregoing reasons for distinction with respect to Claim 1, Applicant has added new Claim 46, which is dependent upon Claim 1 and includes all of the above-noted limitations alleged to impart distinction between the above-noted claims and Claim 1. Thus, upon a finding of allowability of Claim 46, Applicant submits that such a finding would provide a linking claim to link the inventions of Claims 16, 31, 34 and 40 to the invention of Claim 46, resulting in rejoinder of Claims 16, 31, 34 and 40 being proper under MPEP 821.04(a). As such, Applicant respectfully requests rejoinder of Claims 16, 31, 34 and 40, and the respective dependent claims, upon a finding of allowability of Claim 46.

If a communication with Applicant's Attorneys would assist in advancing this case to allowance, the Examiner is cordially invited to contact the undersigned so that any remaining issues may be promptly resolved.

The Commissioner is hereby authorized to charge any additional fees that may be required for this amendment, or credit any overpayment, to Deposit Account No. 07-0845.

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In the event that an extension of time is required, or may be required in addition to that requested in a petition for extension of time, the Commissioner is requested to grant a petition for that extension of time that is required to make this response timely and is hereby authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to the above-identified Deposit Account.

Respectfully submitted,

CANTOR COLBURN LLP

Applicant's Attorneys

By: 

David Arnold

Registration No: 48,894

Customer No. 23413

Address: 20 Church Street, 22nd Floor, Hartford, CT 06103
Telephone: (860) 286-2929
Fax: (860) 286-0115